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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,515	07/27/2000	MICHEL PUECH	065691/0194	6785

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EXAMINER

IMAM, ALI M

ART UNIT

PAPER NUMBER

3737

DATE MAILED: 06/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,515

Applicant(s)

PUECH, MICHEL

Examiner

Ali Imam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 4/18/02, all necessary changes to specification have been inserted.

Response to Arguments

2. Applicant's arguments filed 4/18/02 have been fully considered but they are not persuasive. The examiner respectfully disagrees with the applicant that Silverman (the article and the Patent No. 5,776,068) fails to teach an ultrasound transducer having a nominal excitation frequency greater than 20 MHz and a focal length greater than 10 mm. Silverman teaches an ultrasound transducer having a nominal frequency of 50 MHz and a 12 mm or around 10 mm focal length (see col. 3, lines 57-60 of US Patent No. 5,776,068 and page 838, col. 2 of the article written by Silverman). Applicant contends that Silverman's device only penetrates a maximum of 4-5 mm. Neither the article nor the patent of Silverman supports applicant's argument. Applicant's claim is directed to an ultrasound transducer having a nominal frequency of greater than 20 MHz (50 MHz is obviously greater than 20 MHz) and a focal length of greater than 10-mm. If applicant's invention is adapted for deep penetration then Silverman's device would also be adapted for deep penetration since both the applicant and Silverman's device comprises an ultrasound transducer that has the same nominal frequency and focal length. Furthermore, penetrating tissue in 4-5 mm depth is considered deep enough with respect to the eye.

3. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so

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long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is found in the knowledge generally available to one of ordinary skill in the art.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C.

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122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 2, 5, 10, 12, 13, 17-19, and 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverman et al. ("Three-dimensional High frequency Ultrasonic Parameter Imaging of Anterior Segment Pathology", Ophthalmology 1995 of record).

In regard to claims 1, 2, 5, 10, 12, 13, 17-19, and 28, Silverman teaches in page 838, col. 2, a method and device for ultrasound deep penetration and tissue characterization of human eye by step and structure for providing an ultrasound transducer having a nominal excitation frequency of 50 Mhz and a focal length of 12 mm. The specific limitation of focal length of 25 mm is considered falls within this range unless applicant can expressly provide that one can achieve unexpected results by using 25 mm focal length ultrasound transducer.

In regard to claims 27 and 29-31, Silverman further teaches a broadband pulser/receiver system for exciting and amplifying the receive echo signals.

7. Claims 1, 2, 5, 10, 12, 13, 17-19, 27-31 are further rejected under 35 U.S.C. 102(e) as being anticipated by Silverman et al. (US 5,776,068).

In regard to claims 1, 2, 5, 10, 12, 13, 17-19, and 28, Silverman teaches in col. 3, lines 57-60, a method and device for ultrasound deep penetration and tissue characterization of human eye by the step and structure for providing an ultrasound transducer having a nominal excitation frequency of 50 Mhz and a focal length of about 10 mm. The specific limitation of focal length of 25 mm is considered falls within this range unless applicant can expressly provide that one can achieve unexpected results by using 25 mm focal length ultrasound transducer.

In regard to claims 27 and 29-31, Silverman further teaches in Fig. 2, an electronic scanning system which includes the items for exciting and amplifying the receive echo signals.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 14-16 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Zeimer (US 4,883,061). Silverman teaches all the limitations of the claimed subject matter except for mentioning specifically that the method and device for ultrasound imaging of the eye includes the imaging of posterior segment of the eye. Zeimer teaches in the abstract an ultrasound method and apparatus for penetrating the retinal or nerve fiber layer wherein one of the step or structure involves receiving ultrasound beam from the interior as well as posterior surfaces of the retina (e.g., macula, see col. 1, line 27). Silverman and Zeimer are combinable because they are from the same field of endeavor, that is the ultrasound tissue analysis of human eye. At the time of the invention, it would have been obvious to an ordinary skill in the art to use Zeimer's method of penetrating posterior surface of the eye in using Silverman's ultrasound method and device. The motivation for doing so would have been to diagnose and detect eye diseases, for example, papilledema at an early stage (see col. 1, lines 21-33 of Zeimer).

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10. Claims 3, 4, 6-9, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al. ("Three-dimensional High frequency Ultrasonic Parameter Imaging of Anterior Segment Pathology", Ophthalmology 1995 of record) in view of Coleman et al. (US 5,331,962) or Reinstein et al. (US 5,293,871). Silverman teaches all the limitation of the claimed subject matter except for mentioning specifically the step or structure for moving the ultrasound transducer. Coleman teaches in Fig. 3, a motor (38 or 26) coupled with an ultrasound imaging system for imaging anterior structures of a human eye. Reinstein teaches in col. 3, line 64 – col. 5, line 43, an ultrasound transducer attached to a motor (28). Silverman and Coleman are combinable because they are from the same field of endeavor, that is the ultrasound tissue analysis of human eye. At the time of the invention, it would have been obvious to an ordinary skill in the art to use Coleman's method of moving the ultrasound transducer by adding a motor to the Silverman's ultrasound imaging device. The motivation for doing so would have been to properly align the transducer for accurate diagnosis of the diseased area of the eye.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Imam whose telephone number is 703-305-0028. The examiner can normally be reached on Mon. - Th., 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on 703-308-3256. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0758 for regular communications and 703-308-0758 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



AMI
June 20, 2002



Marvin M. Lateef
Supervisory Patent Examiner
Group 3700